6. Brumback

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/491,146 TIM

DATE: 09/06/2001 TIME: 09:10:36

Input Set : N:\Crf3\RULE60\09491146.txt
Output Set: N:\CRF3\09062001\I491146.raw

```
SEQUENCE LISTING
```

```
3 (1) GENERAL INFORMATION:
             (i) APPLICANT: KHUDYAKOV, YURI E.
      6
                            FIELDS, HOWARD A.
            (ii) TITLE OF INVENTION: MOSAIC PROTEIN AND RESTRICTION
      8
     9
                                      ENDONUCLEASE ASSISTED LIGATION METHOD FOR MAKING THE SAME
           (iii) NUMBER OF SEQUENCES: 55
     11
     13
            (iv) CORRESPONDENCE ADDRESS:
     14
                  (A) ADDRESSEE: JONES & ASKEW, LLP
                  (B) STREET: 191 Peachtree Street, N.W., 37th Floor
     15
     16
                  (C) CITY: Atlanta
                  (D) STATE: GA
     17
     18
                  (E) COUNTRY: USA
                                                             ENTERED
     19
                  (F) ZIP: 30303-1769
     21
             (V) COMPUTER READABLE FORM:
     22
                  (A) MEDIUM TYPE: Floppy disk
     23
                  (B) COMPUTER: IBM PC compatible
                  (C) OPERATING SYSTEM: PC-DOS/MS-DOS
     24
     25
                  (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
     27
            (vi) CURRENT APPLICATION DATA:
                  (A) APPLICATION NUMBER: US/09/491,146
C--> 28
C--> 29
                  (B) FILING DATE: 25-Jan-2000
     30
                  (C) CLASSIFICATION:
     32
           (vii) PRIOR APPLICATION DATA:
                  (A) APPLICATION NUMBER: 08/921,887
     33
     34
                  (B) FILING DATE:
     37
          (viii) ATTORNEY/AGENT INFORMATION:
     38
                  (A) NAME: WARREN, WILLIAM L.
     39
                  (B) REGISTRATION NUMBER: 36,714
     40
                  (C) REFERENCE/DOCKET NUMBER: 03063-0380
     42
            (ix) TELECOMMUNICATION INFORMATION:
     43
                  (A) TELEPHONE: 404-818-3700
     44
                  (B) TELEFAX: 404-818-3799
       (2) INFORMATION FOR SEQ ID NO: 1:
     49
             (i) SEQUENCE CHARACTERISTICS:
     50
                  (A) LENGTH: 55 base pairs
     51
                  (B) TYPE: nucleic acid
     52
                  (C) STRANDEDNESS: single
     53
                  (D) TOPOLOGY: linear
     55
            (ii) MOLECULE TYPE: cDNA
     57
           (iii) HYPOTHETICAL: NO
     59
            (iv) ANTI-SENSE: NO
     61
             (v) FRAGMENT TYPE: internal
     63
            (vi) ORIGINAL SOURCE:
     64
                  (A) ORGANISM: Hepatitis virus
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
     70 CCCCGAATTC AACCGAAACC GCAACGTAAA ACCAAACGTA ACACCATTCG TCGTC
                                                                                 55
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RAW SEQUENCE LISTING DATE: 09/06/2001 PATENT APPLICATION: US/09/491,146 TIME: 09:10:36

Input Set : N:\Crf3\RULE60\09491146.txt
Output Set: N:\CRF3\09062001\1491146.raw

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72 (2) INFORMATION FOR SEQ ID NO: 2:
74
        (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 69 base pairs
75
76
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: single
77
78
             (D) TOPOLOGY: linear
      (ii) MOLECULE TYPE: cDNA
80
      (iii) HYPOTHETICAL: NO
82
      (iv) ANTI-SENSE: NO
86
       (v) FRAGMENT TYPE: internal
       (vi) ORIGINAL SOURCE:
88
89
             (A) ORGANISM: Hepatitis virus
       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
95 CCCCGGATCC TATTTCGGAC CAACGATCTG ACCACCACCC GGGAATTTAA CGTCCTGCGG
                                                                            60
                                                                            69
97 ACGACGAAT
99 (2) INFORMATION FOR SEQ ID NO: 3:
        (i) SEQUENCE CHARACTERISTICS:
101
102
              (A) LENGTH: 54 base pairs
103
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
104
              (D) TOPOLOGY: linear
105
107
       (ii) MOLECULE TYPE: cDNA
109
       (iii) HYPOTHETICAL: NO
111
        (iv) ANTI-SENSE: NO
113
        (v) FRAGMENT TYPE: internal
115
        (vi) ORIGINAL SOURCE:
              (A) ORGANISM: Hepatitis virus
116
120
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
122 CCCCGAATTC AACCGAAACC GCAACGTCAG ACCAAACGTA ACACCAACCG TCGT
124 (2) INFORMATION FOR SEQ ID NO: 4:
126
        (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 70 base pairs
127
128
              (B) TYPE: nucleic acid
129
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear
130
       (ii) MOLECULE TYPE: cDNA
132
134
       (iii) HYPOTHETICAL: NO
136
       (iv) ANTI-SENSE: NO
138
        (v) FRAGMENT TYPE: internal
140
        (vi) ORIGINAL SOURCE:
              (A) ORGANISM: Hepatitis virus
141
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
145
147 CCCCGGATCC TATTTCGGAC CAACGATCTG ACCACCACCC GGGAATTTAA CGTCCTGCGG
                                                                             60
                                                                             70
149 ACGACGGTTG
151 (2) INFORMATION FOR SEQ ID NO: 5:
        (i) SEQUENCE CHARACTERISTICS:
153
154
              (A) LENGTH: 51 base pairs
155
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
156
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DATE: 09/06/2001

TIME: 09:10:36 PATENT APPLICATION: US/09/491,146 Input Set : N:\Crf3\RULE60\09491146.txt Output Set: N:\CRF3\09062001\I491146.raw (D) TOPOLOGY: linear 157 (ii) MOLECULE TYPE: cDNA 159 (iii) HYPOTHETICAL: NO 161 163 (iv) ANTI-SENSE: NO 165 (v) FRAGMENT TYPE: internal 167 (vi) ORIGINAL SOURCE: 168 (A) ORGANISM: Hepatitis virus (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5: 172 51 174 CCCCGAATTC AACCGAAACC GCAACGTAAA ACCAAACGTA ACACCTACCG T 176 (2) INFORMATION FOR SEQ ID NO: 6: (i) SEQUENCE CHARACTERISTICS: 178 179 (A) LENGTH: 73 base pairs 180 (B) TYPE: nucleic acid 181 (C) STRANDEDNESS: single 182 (D) TOPOLOGY: linear (ii) MOLECULE TYPE: cDNA 184 186 (iii) HYPOTHETICAL: NO 188 (iv) ANTI-SENSE: NO 190 (v) FRAGMENT TYPE: internal 192 (vi) ORIGINAL SOURCE: 193 (A) ORGANISM: Hepatitis virus 197 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6: 60 199 CCCCGGATCC TATTTCGGAC CAACGATCTG ACCACCACCC GGGAATTTAA CGTCCTGCGG 73 201 ACGACGGTAG GTG 203 (2) INFORMATION FOR SEQ ID NO: 7: 205 (i) SEQUENCE CHARACTERISTICS: 206 (A) LENGTH: 55 base pairs 207 (B) TYPE: nucleic acid 208 (C) STRANDEDNESS: single (D) TOPOLOGY: linear 209 (ii) MOLECULE TYPE: cDNA 211 213 (iii) HYPOTHETICAL: NO 215 (iv) ANTI-SENSE: NO 217 (v) FRAGMENT TYPE: internal (vi) ORIGINAL SOURCE: 219 220 (A) ORGANISM: Hepatitis virus (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7: 224 226 CCCCGAATTC AACCGAAACC GCAACGTAAA CCGAACCGTA ACACCAACCG TCGTC 55 228 (2) INFORMATION FOR SEQ ID NO: 8: (i) SEQUENCE CHARACTERISTICS: 230 231 (A) LENGTH: 69 base pairs 232 (B) TYPE: nucleic acid 233 (C) STRANDEDNESS: single 234 (D) TOPOLOGY: linear 236 (ii) MOLECULE TYPE: cDNA 238 (iii) HYPOTHETICAL: NO 240 (iv) ANTI-SENSE: NO 242 (v) FRAGMENT TYPE: internal 244 (vi) ORIGINAL SOURCE:

RAW SEQUENCE LISTING

RAW SEQUENCE LISTING DATE: 09/06/2001 PATENT APPLICATION: US/09/491,146 TIME: 09:10:36

Input Set: N:\Crf3\RULE60\09491146.txt
Output Set: N:\CRF3\09062001\1491146.raw

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(A) ORGANISM: Hepatitis virus
245
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
249
251 CCCCGGATCC TATTTCGGAC CAACGATCTG ACCACCACCC GGGAATTTAA CGTCCTGCGG
                                                                             60
                                                                             69
253 ACGACGGTT
255 (2) INFORMATION FOR SEQ ID NO: 9:
257
         (i) SEQUENCE CHARACTERISTICS:
258
              (A) LENGTH: 63 base pairs
259
              (B) TYPE: nucleic acid
260
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear
261
263
      (ii) MOLECULE TYPE: cDNA
265
       (iii) HYPOTHETICAL: NO
267
       (iv) ANTI-SENSE: NO
269
         (v) FRAGMENT TYPE: internal
271
        (vi) ORIGINAL SOURCE:
              (A) ORGANISM: Hepatitis virus
272
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
278 CCCCGAATTC AACCGAAACC GCAACGTCAG CCGAAACGTA ACACCCCGCG TCGTCCGCAG
                                                                             60
                                                                             63
282 (2) INFORMATION FOR SEQ ID NO: 10:
        (i) SEQUENCE CHARACTERISTICS:
284
285
              (A) LENGTH: 60 base pairs
286
              (B) TYPE: nucleic acid
287
              (C) STRANDEDNESS: single
288
              (D) TOPOLOGY: linear
290
       (ii) MOLECULE TYPE: cDNA
       (iii) HYPOTHETICAL: NO
292
     (iv) ANTI-SENSE: NO
294
296
        (v) FRAGMENT TYPE: internal
        (vi) ORIGINAL SOURCE:
298
299
              (A) ORGANISM: Hepatitis virus
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
305 CCCCGGATCC TATTTCGGAC CAACGATCTG ACCACCACCC GGGAATTTAA CGTCCTGCGG
                                                                             60
308 (2) INFORMATION FOR SEQ ID NO: 11:
         (i) SEQUENCE CHARACTERISTICS:
310
31:1
              (A) LENGTH: 55 base pairs
312
              (B) TYPE: nucleic acid
313
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear
314
       (ii) MOLECULE TYPE: cDNA
316
       (iii) HYPOTHETICAL: NO
318
       (iv) ANTI-SENSE: NO
320
322
        (v) FRAGMENT TYPE: internal
        (vi) ORIGINAL SOURCE:
324
325
              (A) ORGANISM: Hepatitis virus
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
                                                                             55
331 CCCCGAATTC AACCGAAACC GCAACGTAAA ACCAAACGTA ACGCTCACCG TCGTC
333 (2) INFORMATION FOR SEQ ID NO: 12:
335
         (i) SEQUENCE CHARACTERISTICS:
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DATE: 09/06/2001

TIME: 09:10:36 PATENT APPLICATION: US/09/491,146 Input Set : N:\Crf3\RULE60\09491146.txt Output Set: N:\CRF3\09062001\I491146.raw 336 (A) LENGTH: 69 base pairs 337 (B) TYPE: nucleic acid 338 (C) STRANDEDNESS: single 339 (D) TOPOLOGY: linear 341 (ii) MOLECULE TYPE: cDNA (iii) HYPOTHETICAL: NO 343 (iv) ANTI-SENSE: NO 345 (v) FRAGMENT TYPE: internal 347 349 (vi) ORIGINAL SOURCE: 350 (A) ORGANISM: Hepatitis virus 354 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12: 60 356 CCCCGGATCC TATTTCGGAC CAACGATCTG ACCACCACCC GGGAATTTAA CGTCCTGCGG 69 358 ACGACGGTG 360 (2) INFORMATION FOR SEQ ID NO: 13: 362 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 55 base pairs 363 364 (B) TYPE: nucleic acid 365 (C) STRANDEDNESS: single 366 (D) TOPOLOGY: linear 368 (ii) MOLECULE TYPE: cDNA 370 (iii) HYPOTHETICAL: NO 372 (iv) ANTI-SENSE: NO (v) FRAGMENT TYPE: internal 374 (vi) ORIGINAL SOURCE: 376 377 (A) ORGANISM: Hepatitis virus 381 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13: 55 383 CCCCGAATTC AACCGAAACC GCAACGTAAA AACCAGCGTA ACACCAACCG TCGTC 385 (2) INFORMATION FOR SEQ ID NO: 14: (i) SEQUENCE CHARACTERISTICS: 387 388 (A) LENGTH: 69 base pairs 389 (B) TYPE: nucleic acid 390 (C) STRANDEDNESS: single (D) TOPOLOGY: linear 391 393 (ii) MOLECULE TYPE: cDNA 395 (iii) HYPOTHETICAL: NO (iv) ANTI-SENSE: NO 397 399 (v) FRAGMENT TYPE: internal 401 (vi) ORIGINAL SOURCE: 402 (A) ORGANISM: Hepatitis virus (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14: 408 CCCCGGATCC TATTTCGGAC CAACGATCTG ACCACCACCC GGGAATTTAA CGTCCTGCGG 60 410 ACGACGGTT 69 412 (2) INFORMATION FOR SEQ ID NO: 15: (i) SEQUENCE CHARACTERISTICS: 414 415 (A) LENGTH: 55 base pairs 416 (B) TYPE: nucleic acid 417 (C) STRANDEDNESS: single (D) TOPOLOGY: linear 418

RAW SEQUENCE LISTING

(ii) MOLECULE TYPE: cDNA

420

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/491,146

DATE: 09/06/2001 TIME: 09:10:37

Input Set : N:\Crf3\RULE60\09491146.txt
Output Set: N:\CRF3\09062001\I491146.raw

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L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:626 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=23
L:653 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=24
L:682 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=25
L:711 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=26
L:740 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=27
L:769 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=28
L:798 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=30
L:827 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=31
L:885 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=32
L:914 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=33
L:1425 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=33
L:1425 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=52